

REMARKS

The Applicant sincerely appreciates the thorough examination of the present application as evidenced by the Office Actions of August 9, 2005, and January 10, 2006. In particular, the Applicant appreciates the Examiner's indication that Claims 20-27 and 29-35 are allowed, and that Claims 7, 8, 10, 11, 13, 14, 38, and 40 would be allowable if rewritten in independent form. In response, the Applicant has amended Claims 1, 4-6, 9, and 12 to more clearly define the claimed invention; rewritten Claims 7, 10, and 13 in independent form (indicated allowable); amended Claims 36, 37, and 39 to more clearly define the claimed invention; rewritten Claims 38 and 40 in independent form (indicated allowable); and added new Claims 44 and 45.

In the following remarks, the Applicant will show that all claims are patentable over the cited art. A Notice of Allowance is thus respectfully requested in due course.

Claims 7-8, 10-11, 13-14, 20-27 and 29-35, 38, And 40 Are Allowable

The cover sheet of the Office Action indicates that dependent Claims 7-8, 10-11, 13-14, 38, and 40 are merely objected to, while page 7 of the Office Action states that "Claims 7-8, 10-11, 13-14, 38 and 39 ... would be allowable if rewritten in independent form...." (Underline added.) Moreover, page 6 of the Office Action states that "Claims 37 and 39 are rejected...." (Underline added.) After review of the Office Action, the Claims, and the cited art, the Applicant believes that the Examiner intended to indicate that the subject matter of dependent Claims 7-8, 10-11, 13-14, 38, and 40 is allowable. Accordingly, the Applicant believes that Claim 39 was inadvertently included in the listing of allowable dependent claims on page 7 of the Office Action and that Claim 40 was inadvertently omitted from the listing of allowable dependent claims on page 7 of the Office Action. If the Applicant's belief is incorrect, the Applicant respectfully requests that the Examiner contact Scott C. Hatfield (the attorney for the Applicant) at the Examiner's earliest convenience.

The Applicant has thus rewritten Claims 7, 10, 13, 38, and 40 in independent form thus placing these claims in condition for allowance. Moreover, dependent Claims 8, 11, 14, and 45 are in condition for allowance as depending from Claims 7, 10, and 13. Moreover, Claims 20-27 and 29-35 are allowable without amendment as indicated on page 7 of the Office Action.



Claims 1-6, 9, 12, 36-37, 39, and 43-45 Are Patentable Over The Cited Art

Independent Claims 1 and 36 have been rejected under 35 U.S.C. Sec. 102(b) as being anticipated by U.S. Patent No. 5,729,152 to Leung et al. ("Leung"). Claims 1 and 36, however, are patentable over Leung for at least the reasons discussed below.

Claim 1, for example, recites a termination circuit for a transmission line, the termination circuit including:

- an input node receiving an input signal over the transmission line;
- an NMOS pull-down transistor coupled between the input node and a first reference voltage wherein the NMOS pull-down transistor is configured to provide an electrical path between the first reference voltage and the input node responsive to the input signal having a first voltage level; and
- a PMOS pull-up transistor coupled between the input node and a second reference voltage wherein the PMOS pull-up transistor is configured to provide an electrical path between the second reference voltage and the input node responsive to the input signal having a second voltage level, wherein the first reference voltage is less than the second reference voltage and wherein the first voltage level is greater than the second voltage level;
- wherein the NMOS pull-down transistor maintains the electrical path between the first reference voltage and the input node while the input signal is maintained steady state at the first voltage level;
- wherein the PMOS pull-up transistor maintains the electrical path between the second reference voltage and the input node while the input signal is maintained steady state at the second voltage level.

The Applicant respectfully submits that Leung fails to teach or suggest an NMOS pull-down transistor and/or a PMOS pull-up transistor as recited in Claim 1. Instead, the NMOS transistor 2006 of Leung between the bus line 2030 and the supply voltage VDD is a pull-up transistor, and the PMOS transistor 2007 of Leung between the bus line 2030 and the ground voltage is a pull-down transistor. Leung thus teaches away from the structure of Claim 1.

Accordingly, the Applicant respectfully submits that Claim 1 is patentable over the cited art. In addition, Claim 36 is patentable for reasons similar to those discussed above with regard to Claim 1. The Applicant further submits that dependent Claims 2-6, 9, 12, 37, 39, 43, and 44 are patentable at least as per the patentability of Claim 1 from which they depend.

Various ones of the dependent claims are also separately patentable. Claim 44, for example, includes the additional recitation of:


a first input resistor coupled between the input node and a gate electrode of the NMOS transistor; and
a second input resistor coupled between the input node and a gate electrode of the PMOS transistor.

Leung fails to teach or suggest input resistors coupled to gate electrodes of the transistors 2006 and/or 2007 of Leung. Moreover, the Office Action states that the art fails to teach or suggest "a first input resistor connected between the input node and a control electrode of the pull-down transistor ..." or "a pull-up input resistor connected between the input node and a control electrode of the pull-up transistor...." Office Action, page 8. Accordingly, dependent Claim 44 is separately patentable over the cited art.

CONCLUSION

Accordingly, the Applicant submits that all pending claims in the present application are in condition for allowance, and a Notice of Allowance is respectfully requested in due course. The Examiner is encouraged to contact the undersigned attorney by telephone should any additional issues need to be addressed.

Respectfully submitted,


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